

IN THE SPECIFICATION

Please amend the paragraph at Page 1, line 13 - Page 2, line 3, as follows:

§1 ~~In recent~~ recent years, PCR has been one of the essential techniques for research and testing in the fields of biochemistry, molecular biology and clinicopathology. A feature of PCR is that the reaction is carried out using a thermostable DNA polymerase. The DNA polymerases most frequently utilized currently are, mainly, thermostable DNA polymerases called "Pol I-like", such as a thermostable DNA polymerase derived from Thermus aquaticus (Taq DNA polymerase) and a thermostable DNA polymerase derived from Thermus thermophilus (Tth DNA polymerase). The advantageous characteristics of Pol I-like DNA polymerases are high amplification efficiency and easiness to set conditions. However, these enzymes have a defect of low fidelity in nucleic acid incorporation during amplification and are considered to be unsuitable for use in the case of cloning the amplified DNA.

Please move the following paragraphs from Page 59, line 7 - Page 60, line 12, to Page 5, after line 5:

- BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows the EXO I region (underlined) and amino acid sequence adjacent to the EXO I region in various DNA polymerases. These sequences are identified as follows: KOD (SEQ ID NO: 29); Pfu (SEQ ID NO: 30); Vent (SEQ ID NO: 31); Sso (SEQ ID NO: 32); T7 (SEQ ID NO: 33); and T4 (SEQ ID NO: 34).

§2 FIG. 2 shows relative 3'-5' exonuclease activities in various KOD DNA polymerase variants (calculated relative to the activity of WT as 100).

FIG. 3 shows the result of PCR amplification of a-globin gene (3.6kb) using human genome DNA as a template and various KOD DNA polymerase variants.

A: PCR using 100 ng of human cell line K562-derived DNA

B: PCR using 10 ng of human cell line K562-derived DNA

1: naturally occurring DNA polymerase (WT),

2: variant HD,

3: variant HE,

- 4: variant HY,
- 5: variant HA,
- 6: variant HK,
- 7: variant HR,
- 8: variant IK,
- 9: variant IQ.

FIG. 4 shows the result of the PCR amplification of Myosin heavy chain gene (6.2kb) using human genome DNA as a template and various modified KOD DNA polymerases.

PCR using 50 ng of human cell line K562-extracted DNA

- B²
- 1: variant HD,
 - 2: variant HE,
 - 3: variant HY,
 - 4: variant HA.

Fig. 5 shows mutation frequency (%) in PCR amplification using various KOD DNA polymerase variants.

Please insert the following paragraph on Page 40, after line 17:

B³ --Reference Example 1 discloses a process for preparing a known DNA polymerase gene which is used in Example 1 below.--